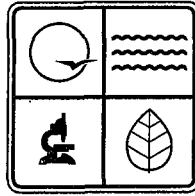


STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI AIR CONSERVATION COMMISSION



PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **042006-004**

Project Number: **2006-01-027**

Owner: **Intermet**

Owner's Address: **P.O. Box 278, Monroe City, MO 63456**

Installation Name: **Diversified Diemakers, Inc.**

Installation Address: **801 Second Street, Monroe City, MO 63456**

Location Information: **Monroe County, S18, T56N, R7W**

Application for Authority to Construct was made for:

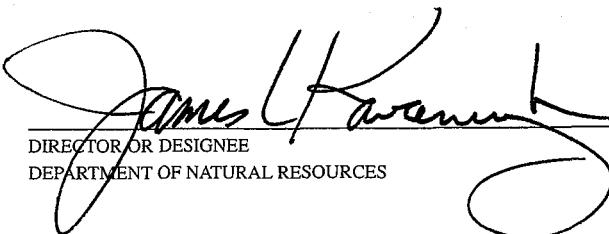
Installation of one (1) 1500 pound per hour gas fired melt cell, two (2) 800-ton diecasting machines, one (1) 0.8 ton per hour abrasive rotoblast with dust collector, and a electric convection heat treating oven (100KW or 340,000 BTU).
This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

☐ Standard Conditions (on reverse) are applicable to this permit.

☒ Standard Conditions (on reverse) and Special Conditions (listed as attachments starting on page 2) are applicable to this permit.

APR 10 2006

EFFECTIVE DATE


DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional Office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed Special Conditions as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.

2006-01-027

Internet

P.O. Box 278, Monroe City, MO 63456

Diversified Diemakers, Inc.

801 Second Street, Monroe City, MO 63456

Monroe County, S18, T56N, R7W

Installation of one (1) 1500 pound per hour gas fired melt cell, two (2) 800-ton diecasting machines, one (1) 0.8 ton per hour abrasive rotoblast with dust collector, and a electric convection heat treating oven (100KW or 340,000 BTU). This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Page No.	2
Permit No.	
Project No.	2006-01-027

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Diversified Diemakers
Monroe County, S18, T56N, R7W

- I. Process Requirement
 - A. Diversified Diemakers, Inc. shall only melt or process clean metal (aluminum, zinc, & magnesium) that contains no visible oil or other organic contaminant.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE

SECTION (5) REVIEW

Project No: 2006-01-027

Installation ID No: 137-0004

Permit No:

Diversified Diemakers
801 Second Street
Monroe City, MO 63456

Complete: January 27, 2006

Reviewed: February 4, 2006

Parent Company:
Intermet
P.O. Box 278
Monroe City, MO 63456

Monroe County, S18, T56N, R7W

REVIEW SUMMARY

- Diversified Diemakers has applied for authority to install one (1) 1500 pound per hour gas fired melt cell, two (2) 800-ton diecasting machines and one (1) 0.08 ton per hour rotoblast with dust collector.
- Hazardous air pollutants (HAPs) are emitted from the natural gas usage with the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- Subpart "RRR" of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Secondary Aluminum Production does not apply to the proposed equipment as the facility melts only clean aluminum and it is an area source.
- A dust collector is being used with the rotoblast to control PM₁₀ emissions.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all air pollutants are below de minimis levels.
- This installation is located in Monroe County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2] since the facility melts only clean metals.

- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing is not required for the equipment.
- A revision to the Basic Operating Permit application is required for this equipment within 30 days of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Diversified Diemakers (dba Internet) has three production facilities located in Monroe City, Palmyra and Hannibal, all in Missouri. Diversified Diemakers, located in Monroe City primarily manufactures zinc, aluminum and magnesium diecastings and assemblies for automotive and electronics industries.

The process flow for the aluminum plant consists of eleven (11) aluminum melting pots (EP-71) and eleven (11) 400 ton diecasting cells (EP-72). No pollution control equipment is installed on the melting pots or the diecast machines. The aluminum plant upon completion of the construction will have twelve (12) melting pots and twelve (12) die casting machines, as one of the existing die casting units will be replaced. After melting, the molten metal is poured into the diecasting machines. When the molds cool, the castings are either rotoblashed or vibratory deburred for surface finish. Some of the castings are subjected to machining. This construction will expand the rotoblast finish capacity and add heat treating in an electric furnace to the aluminum plant. According to Al Demmitt, Director of Engineering at Diversified Diemakers (dba Internet), stated in a phone conversation on 02/28/2006 that the Chromate Conversion Coating (EP-75) has been removed from service and is not operational. Chromate Conversion Coating emissions do occur in the Zinc plant at another emission point. Chromate Conversion Coating emissions will not increase in the aluminum plant because of the installation of this equipment.

This aluminum plant only melts clean aluminum in a non – sweating process, no alloying process exist, no fluxing processes are conducted with a nitrogen machine that injects the flux under pressure into a melting pot, and there are no chlorine demagging processes. These processes (sweating process, alloying, fluxing with a nitrogen machine and chlorine demagging) have not been considered in the determination of the emissions from the aluminum plant.

The Basic Operating Permit Renewal was complete on 04/01/2003. Construction permit, Permit No. 082001-002, was issued to Diversified Diemakers (formerly known as Diemakers, Inc.) to add an 800 ton diecasting machine and a small crucible oven. The following permits have been issued to Diversified Diemakers from the Air Pollution Control Program.

Table 1: Permits issued to Diversified Diemakers (dba Internet) (137-0004)

Permit Number	Description
OP	Basic Operating Permit Renewal complete on 04/01/2003
082001-002	Melting Furnace
OP	Basic Operating Permit amendment complete on 04/05/2002
OP	Basic Operating Permit amendment complete on 09/18/1998
0190-008	Sec 5 and 6 project number EX31600004005

PROJECT DESCRIPTION

Diversified Diemakers proposes to install one (1) 1500 pound per hour at three million BTU gas fired melt cell (EP-71). This melt cell and an existing holding furnace will feed two (2) new 800-ton diecasting machines (EP-72) rated at 0.72 tons per hour. The diecast machine will operate at approximately a 40 second cycle with an average shot weight of 8.3 pounds. After casting the part will be blasted in a flow through 0.08 ton per hour rotoblast (EP-75) with cyclone (CD-73). After blasting with abrasive, the casting will be heat treated in an electric convection oven (100KW or 340,000 BTU) to 500 degrees for two hours.

EMISSIONS/CONTROLS EVALUATION

PM₁₀ is the main air pollutant from this process. Most of the PM₁₀ is emitted from the Rotoblast (EP-75). Small amounts of volatile organic compounds (VOC) are also emitted from the diecasting machine. Emission factors for the diecasting machine are obtained from the Environmental Protection Agency (EPA) document Factor Information Retrieval (FIRE) V6.25, *Source Classification Codes and Emission Factors Listings for Criteria Air Pollutants* (10/04). The emission factor for the rotoblaster was taken from plant data. That data is the weight of the material removed from the pulse paxdry dust collector. A subtraction of the weight is allowed for the efficiency for the collector and then the weight is divided by pound of metal produced. The emission factor for the rotoblaster is based on the amount of metal produced.

Some nitrogen oxides (NO_x), sulfur oxides (SO_x), carbon monoxide (CO), VOC and HAPs are emitted from natural gas usage. The emission factors used for the natural gas usage were obtained from the Environmental Protection Agency (EPA) document AP-42, Section 1.4, *Natural Gas Combustion*, (10/98). The following table provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2003 EIQ)	Potential Emissions of the Application	Installation Conditioned Potential
PM ₁₀	15.0	31.35	0.77	12.13	N/A
SO _x	40.0	0.35	0.055	0.07	N/A
NO _x	40.0	9.81	4.53	1.72	N/A
VOC	40.0	4.89	0.326	0.52	N/A
CO	100.0	7.95	N/D	1.18	N/A
HAPs	10.0/25.0	1.76	N/D	0.03	N/A

N/A = Not Applicable; N/D = Not Determined

The Existing Potential Emissions above were calculated by adding the Existing Potential Emissions to the Potential Emissions of the Application in permit number 08-2001-002 Table 1: Emissions Summary with project number 2001-05-022. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year) and operating at Maximum Hourly Design Rate (MHDR).

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all air pollutants are below de minimis levels.

APPLICABLE REQUIREMENTS

Diversified Diemakers shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required April 1 for the previous year's emissions.

- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-3.090

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400

AMBIENT AIR QUALITY IMPACT ANALYSIS

Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Tim Hines
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated January 01, 2006, received January 11, 2006, 2001, designating Internet as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Northeast Regional Office Site Survey, dated January 25, 2006.

Mr. Al Dimmitt
Director of Engineering Services
Diversified Diemakers
P.O. Box 278
Monroe City, MO 63456

RE: New Source Review Permit - Project No. 2001-05-022

Dear Mr. Dimmitt:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files.

Operation in accordance with these conditions, your new source review permit application and with your operating permit is necessary for continued compliance.

The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact me at (573) 751-4817, or you may write to me at the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102. Thank you.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:thl

Enclosures

c: Northeast Regional Office
PAMS File 2006-01-027

Permit Number: